This listing of claims will replace all prior versions, and listings, of claims in the application:

The Status of the Claims

1. (Currently Amended) A plasma ignition method in a semiconductor manufacturing device, comprising:

(a) setting a predetermined pressure, source power and bias power of a chamber and flowing a predetermined flow rate of CHF_3 and Ar gases into the chamber;

(b) introducing a predetermined flow rate of Cl_2 gas into the chamber;

(c) completing the supply of Cl_2 gas prior to igniting plasma; and

(d) igniting plasma.

2. (Original) The plasma ignition method of claim 1, wherein a pressure of the chamber in is substantially equal to the predetermined pressure.

3. (Original) The plasma ignition method of claim 2, wherein the predetermined pressure ranges from about 6 to 8 mTorr.

4. (Original) The plasma ignition method of claim 3, wherein the predetermined source power and bias power in the step range from about 1 to 10 watts.

5. (Original) The plasma ignition method of claim 4, wherein the predetermined flow rate of Cl2 gas in the step ranges from about 30 to 150 sccm.

6. (Original) The plasma ignition method of claim 5, wherein the predetermined flow

rate of CHF3 gas and Ar gas range about from 0 to 30 sccm and from about 0 to 90 sccm, respectively.

7. (Original) The plasma ignition method of claim 1, wherein (a) and (b) are completed in about 10 to 15 seconds.

8. (Original) The plasma ignition method of claim 1, wherein the source power and the bias power are set to range about from 600 to 1000 watts and about from 100 to 200 watts, respectively.

9. (Currently Amended) A plasma ignition apparatus in a semiconductor manufacturing device, comprising:

means for setting a predetermined pressure, source power and bias power of a chamber and flowing a predetermined flow rate of CHF_3 and Ar gases into the chamber;

means for introducing a predetermined flow rate of Cl_2 into the chamber; means for completing the supply of Cl_2 gas prior to igniting plasma; and

means for igniting plasma.

10. (Original) The plasma ignition apparatus of claim 9, wherein a pressure of the chamber is maintained at the predetermined pressure.

11. (Original) The plasma ignition apparatus of claim 10, wherein the predetermined pressure ranges about from 6 to 8 mTorr.

12. (Original) The plasma ignition apparatus of claim 11, wherein the predetermined source power and bias power range about from 1 to 10 watts.

13. (Original) The plasma ignition apparatus of claim 12, wherein the predetermined flow rate of Cl_2 gas ranges about from 30 to 150 sccm.

14. (Original) The plasma ignition apparatus of claim 13, wherein the predetermined flow rate of CHF_3 gas and Ar gas range about from 0 to 30 sccm and about from 0 to 90 sccm, respectively.

15. (Original) The plasma ignition apparatus of claim 9, wherein the igniting means includes means for setting source power and bias power to range about from 600 to 1000 watts and about from 100 to 200 watts, respectively.

16. (New) A plasma ignition method in a semiconductor manufacturing device, comprising:

(a) setting a predetermined pressure, source power and bias power of a chamber and flowing a predetermined flow rate of CHF_3 and Ar gases into the chamber;

(b) introducing a predetermined flow rate of Cl_2 gas into the chamber;

(c) completing the supply of Cl_2; and

(d) igniting plasma using residual Cl_2 gas and then pumping the Cl_2 gas out of the chamber.

17. (New) A plasma ignition apparatus in a semiconductor manufacturing device, comprising:

means for setting a predetermined pressure, source power and bias power of a chamber and flowing a predetermined flow rate of CHF_3 and Ar gases into the chamber;

means for introducing a predetermined flow rate of Cl_2 into the chamber; means for completing the supply of Cl_2; and

means for igniting plasma using residual Cl_2 gas and then pumping the Cl_2 gas out of the chamber.